



2016 E.C 1st Semester 1st Quarter Maths 3rd Worksheet for grade 10th

Name ----- Grade ----- Section -----
No -----

I. Write True or False accordingly.

1. The axis of symmetry of the graph of $y = -2x^2$ is $x = -2$ line .
2. The orthogonal axis of $y = 2x^2 + 3$ is $y = -3$.
3. $y = (x+k)^2 + C$ its graph shifts horizontally depending on the value of C.
4. The function $y = ax^2 + bx + c$ has a minimum value if the value of c is negative .
5. The relation $R = \{(x, y) : y \text{ is a sister of } x\}$ represents a function .
6. $3x^2 \wedge 2x^3$ are like terms .
7. $f(x) = \sqrt{2}x^5 - \frac{1}{2}x^3 + \sqrt{3}x^2 - x + 2$ represents a polynomial function .
8. $f(x) = ax^2$ for $a > 0$, if the value of "a" gets larger and larger, then its graph shrinks and get closer to the y- axis.

II. Choose the correct answer and write the letter on the space provided.

Given two functions f and g, such that the degree of $f = m$ and degree of $g = n$, then answer question 9, 10, $\wedge$ 11,

9. The degree of $(f+g)(x)$ is equal to:-
A. $m+n$ B. $m-n$ C. mn D. $\wedge$
10. The degree of $(f \cdot g)(x)$ is always _____
A. $m+n$ B. mn C. $m-n$ D. $\wedge$
11. Which of the following is not always a polynomial.
A. $f+g$ B. fg C. $f-g$ D. $\frac{f}{g}$

Let $f(x) = -2(x+3)^2 + 1$, then answer question 12, 13 $\wedge$ 14.

12. What is the vertex of the graph of $f(x)$?
A. $(-2, 1)$ B. $(3, 1)$ C. $(-2, 3)$ D. $(-3, 1)$
13. What is the orthogonal axis?
A. $y = -2$ B. $y = -3$ C. $y = 1$ D. $y = 2$
14. Which one is false.
A. The graph opens down word
B. it has a vertical shift

C. It also has horizontal shift

D. Its x-intercept is (-3, 0).

15. What is a leading coefficient of $f(x) = -4x^2 - x^3 - 5 + 2x + 3x^2$?

A. -1

B. -4

C. 3

D. -5